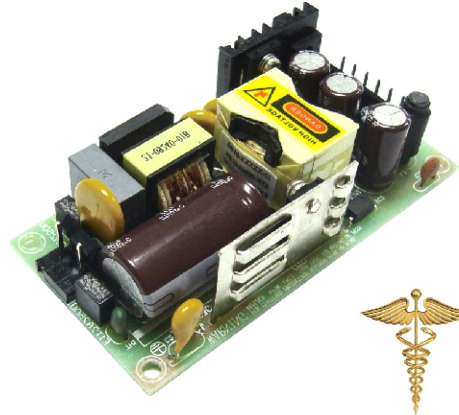


# HBU60 SERIES

## 60W Open frame type medical power supplies for health care applications

### Description:

The HBU60 series of compact, open frame constructed, AC/DC switching mode power supplies provide 60 Watts of continuous output power. They are suited for use in health care applications. All models meet FCC Part-18 class B and CISPR-11 EN55011 class B emission limits and are designed to comply with UL/c-UL(UL 60601-1:2<sup>nd</sup> Edition), TUV/T-mark(EN 60601-1:2<sup>nd</sup> Edition) and new CE requirements. All units are 100% burned in and tested.



### Features:

- Wide Operating voltage 90 to 264 VAC, 47 to 63 Hz
- Single output
- Input connector mates with molex housing 09-50-3031/35977-0300 and molex 2478/ 35922 series crimp terminal.
- Output connector mates with molex housing 09-50-3061/35977-0600 and molex 2478/ 35922 series crimp terminal.
- Input surge current, over voltage and over load protection
- Size: 2"x4"x1"
- Class I
- 2 year warranty

### Safety approvals :



### Electrical characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vin	Safety Approvals Input Voltage Range		100		240	VAC
	Operate Voltage Range		90		264	VAC
fin	Input Frequency		47		63	Hz
Po	Output Power Range	Vin=90 to 264 VAC	0		60	W
Vo	Output Voltage Range		See rating Chart			V
Io	Output Current Range		See rating Chart			A
Iil	Input Current (Low Line)	Io=Full load, Vin=115VAC			1.62	A
Iih	Input Current (High Line)	Io=Full load, Vin=230VAC			0.72	A
Irl	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC		26	30	A
Irh	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC		43	47	A
Eff	Efficiency	Io=Full load, Vin=230VAC		85		%
REG-i	Line Regulation	Io=Full load			1	%
REG-o	Load Regulation	Vin=230VAC			5	%
OVP	Over Voltage Protection		112		132	%
OCP	Over Current Protection		110		150	%
Ttr	Time of Transient Response	Io=Full load to Half Load, Vin=100VAC			4	mS
Thold	Hold-Up Time	Io=Full load, Vin=110VAC	12	16		mS
Ts	Start Up Time	Io=Full load, Vin=100VAC	0.3	1	2	S
Vp-p	Ripple & Noise (Peak to Peak)	Full load, Vin=90VAC			1	%
Ilk	Safety Ground Leakage Current	Io=Full load, Vin=240VAC		0.1	0.3	mA
TC	Temperature Coefficient	All output	-0.04		0.04	%/°C

### Environmental :

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Toper	Operating Temperature		0	40	70	°C
Tstg	Storage Temperature		-40		85	°C
Ho	Operating Humidity		0		95	%
Hr	Storage Humidity		0		75	%
MTBF	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F		0.1M			Hrs
Pd	Derate linearly from 100% load at 40°C to 50% load at 70°C					

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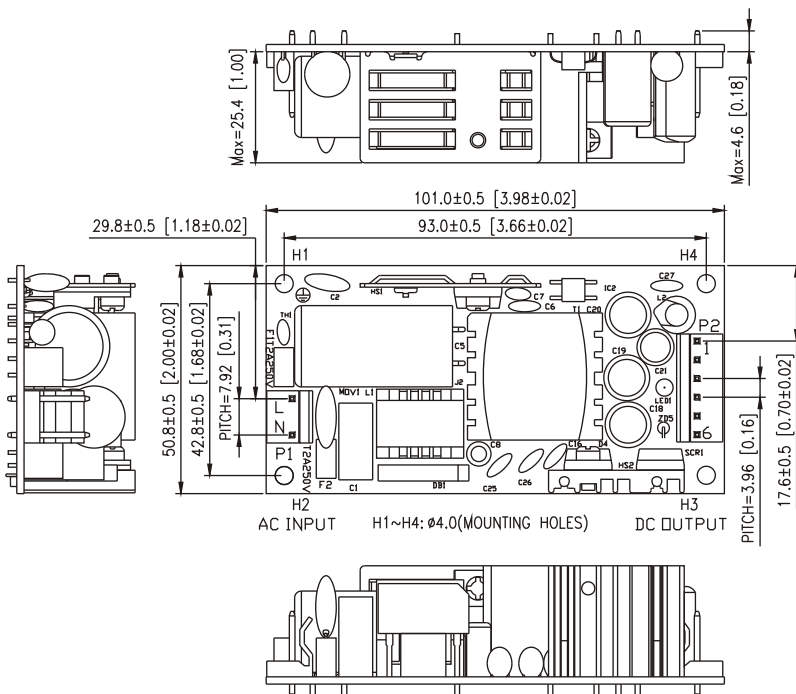
## Safety specifications:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	5656			VDC
Vpg	Dielectric Withstanding Voltage for Primary to Ground	Primary to ground	2828			VDC
Ris	Isolation Resistance	Test Voltage=500VDC	50			MΩ
CISPR	EMI requirements for CISPR-11	Vin=220VAC	B			CLASS
FCC	EMI requirements for FCC PART-18	Vin=110VAC	B			CLASS

## Output voltage and current rating chart (Single output) :

Model Number	Output Voltage	Output Current	Total Regulation	Maximum Output Power
HBU60-105	12 ~ 13 VDC	5.00 ~ 4.61 A	5%	60W
HBU60-106	13 ~ 16 VDC	4.61 ~ 3.75 A	5%	60W
HBU60-107	16 ~ 21 VDC	3.75 ~ 2.85 A	5%	60W
HBU60-108	21 ~ 27 VDC	2.85 ~ 2.22 A	3%	60W
HBU60-109	27 ~ 33 VDC	2.22 ~ 1.81 A	3%	60W
HBU60-110	33 ~ 40 VDC	1.81 ~ 1.50 A	3%	60W

## Mechanical specifications :



## Pin Chart

MODEL	PIN					
	1	2	3	4	5	6
HBU60-1XX	OUT	OUT	OUT	RTN	RTN	RTN

### Note:

1. Dimensions are shown in inches or mm.
2. Weight: 140gs approx.
3. Input connector mates with Molex housing 09-50-3031/35977-0300 and Molex 2478/ 35922 series crimp terminal.
4. Output connector mates with Molex housing 09-50-3061/35977-0600 and Molex 2478/ 35922 series crimp terminal.